CLAIMS

What is claimed is:

1. A method for language enhancement, comprising:

receiving text;

identifying grammatical constructs within the text; and

suggesting at least one alternate text portion for at least one original portion of the text, the alternate text portion being consistent with the grammatical constructs of the original portion and having substantially the same meaning as the original portion but conveying a different impression.

2. The method of claim 1 wherein the alternate text portion, when substituted for the original portion generates grammatically correct text.

3. The method of claim 1 wherein the alternate text portion includes at least one adjective for a noun from the original portion.

4. The method of claim 1 wherein the alternate text portion includes at least one synonym for an idiom from the original portion.

5. The method of claim 1 wherein the alternate text portion includes at least one idiom for the original portion.

6. The method of claim 1 wherein the alternate text portion includes at least one adverb for a verb from the original portion.

7. The method of claim 1 wherein the original portion of text is a single word.

8. The method of claim 1 wherein the original portion of text is a clause.

9. The method of claim 1 wherein the original portion of text is an idiom.

10. The method of claim 1 wherein the alternate text portion is compliant with a selected style.

11. The method of claim 10 wherein the selected style is a legal style.

12. The method of claim 10 wherein the selected style is a scientific style.

13. The method of claim 10 wherein the selected style is a medical style.

14. Language enhancement apparatus, comprising:

a memory for storing text;

a natural language parser for identifying grammatical constructs within the text; and

a natural language enricher for suggesting at least one alternate text portion for at least one original portion of the text, the alternate text portion being consistent with the grammatical constructs of the original portion and having substantially the same meaning as the original portion but conveying a different impression.

15. The apparatus of claim 14 wherein the alternate text portion, when substituted for the original portion generates grammatically correct text.

16. The apparatus of claim 14 wherein the alternate text portion includes at least one adjective for a noun from the original portion.

17. The apparatus of claim 14 wherein the alternate text portion includes at least one synonym for an idiom from the original portion.

18. The apparatus of claim 14 wherein the alternate text portion includes at least one idiom for the original portion.

19. The apparatus of claim 14 wherein the alternate text portion includes at least one adverb for a verb from the original portion.

20. The apparatus of claim 14 wherein the original portion of text is a single word.

21. The apparatus of claim 14 wherein the original portion of text is a clause.

22. The apparatus of claim 14 wherein the original portion of text is an idiom.

23. The apparatus of claim 14 wherein the alternate text portion is compliant with a selected style.

24. The apparatus of claim 23 wherein the selected style is a legal style.

25. The apparatus of claim 23 wherein the selected style is a scientific style.

26. The apparatus of claim 23 wherein the selected style is a medical style.

27. A computer-readable storage medium storing program code for causing a computer to perform the steps of:

receiving text;

identifying grammatical constructs within the text; and

suggesting at least one alternate text portion for at least one original portion of the text, the alternate text portion being consistent with the grammatical constructs of the original portion and having substantially the same meaning as the original portion but conveying a different impression.

28. A method for eliminating ambiguities in word meanings within a sentence, comprising:

for each of a plurality of sentences within a training text:

identifying pairs of words, W1 and W2, with known contexts within a sentence, used together in conjunction; and

designating matches between pairs of words, V1 and V2, where V1 is contextually equivalent to W1 as used in the sentence, and V2 is contextually equivalent to W2 as used in the sentence; and

for a sentence submitted by a user:

deriving consistent contexts of words within the sentence, in such a way that pairs of words used in conjunction within the sentence, corresponding to their derived contexts, have matches designated therebetween.

29. The method of claim 28 wherein the pairs of words W1 and W2 include nouns used together in conjunction.

30. The method of claim 28 wherein the pairs of words W1 and W2 include verbs used together in conjunction.

31. The method of claim 28 wherein the pairs of words W1 and W2 include a noun and an adjective preceding the noun.

32. The method of claim 28 wherein the pairs of words W1 and W2 include a verb and an adjective associated with the verb.

33. Apparatus for eliminating ambiguities in word meanings within a sentence, comprising:

a natural language parser for identifying pairs of words, W1 and W2, with known contexts within a sentence, used together in conjunction;

a database manager for designating matches between pairs of words, V1 and V2, where V1 is contextually equivalent to W1 as used in the sentence, and V2 is contextually equivalent to W2 as used in the sentence; and

a context analyzer for deriving consistent contexts of words within the sentence, in such a way that pairs of words used in conjunction within the sentence, corresponding to their derived contexts, have matches designated therebetween.

34. The apparatus of claim 33 wherein the pairs of words W1 and W2 include nouns used together in conjunction.

35. The apparatus of claim 33 wherein the pairs of words W1 and W2 include verbs used together in conjunction.

36. The apparatus of claim 33 wherein the pairs of words W1 and W2 include a noun and an adjective preceding the noun.

37. The apparatus of claim 33 wherein the pairs of words W1 and W2 include a verb and an adjective associated with the verb.

38. A computer-readable storage medium storing program code for causing a computer to perform the steps of:

for each of a plurality of sentences within a training text:

identifying pairs of words, W1 and W2, with known contexts within a sentence, used together in conjunction; and

designating matches between pairs of words, V1 and V2, where V1 is contextually equivalent to W1 as used in the sentence, and V2 is contextually equivalent to W2 as used in the sentence; and

for a sentence submitted by a user:

deriving consistent contexts of words within the sentence, in such a way that pairs of words used in conjunction within the sentence, corresponding to their derived contexts, have matches designated therebetween.

39. A web service comprising:

receiving a request including one or more sentences of natural language text;

deriving at least one suggestion for enhancing the one or more sentences; and

returning a response including the at least one suggestion.

40. The web service of claim 39 wherein the at least one suggestion is encoded using a first parameter to designate a word position within a sentence, a second parameter to designated an action, a third parameter to designate a priority, and a fourth parameter to designate at least one word.

41. The web service of claim 40 wherein possible actions include replace, delete, insert, before and insert after.

42. The web service of claim 40 wherein possible priorities include must, recommended and optional.

43. The web service of claim 40 wherein the fourth parameter is a reference to at least one word residing within a dictionary of words.

44. The web service of claim 43 wherein the dictionary of words resides in a dictionary server computer.

45. The web service of claim 39 wherein the at least one suggestion is ranked according to a usage frequency.

46. The web service of claim 39 wherein possible suggestions include replacement of a key word within a sentence with an idiom.

47. The web service of claim 46 wherein the idiom has a similar meaning as the key word.

48. The web service of claim 46 wherein possible suggestions include modification of text associated with the key word.

49. The web service of claim 48 wherein modification of text associated with the key word includes deletion of an adverb preceding the key word.

50. The web service of claim 48 wherein modification of text associated with the key word includes deletion of an adjective preceding the key word.

51. The web service of claim 48 wherein modification of text associated with the key word includes deletion of a preposition preceding the key word.

52. The web service of claim 48 wherein modification of text associated with the key word includes deletion of a verb preceding the key word.

53. The web service of claim 46 wherein possible suggestions include insertion of a connecting verb before the idiom.

54. A method for deriving database tables for use in enhancing natural language text, comprising:

providing training text conforming to a selected profile, the selected profile corresponding to a specific type of author; and

for each of a plurality of sentences within the training text:

identifying pairs of words, W1 and W2, with known contexts within a sentence, used together in conjunction; and

designating matches between pairs of words, V1 and V2, where V1 is contextually equivalent to W1 as used in the sentence, and V2 is contextually equivalent to W2 as used in the sentence.

55. The method of claim 54 wherein the selected profile is a medical profile.

56. The method of claim 54 wherein the selected profile is a legal profile.

57. The method of claim 54 wherein the selected profile is a scientific profile.

58. The method of claim 54 wherein the selected profile corresponds to a specific author.

59. The method of claim 58 wherein the specific author is a literary author.

60. The method of claim 58 wherein the specific author is a designated user.

61. Apparatus for deriving database tables for use in enhancing natural language text, comprising:

a text receiver for receiving training text conforming to a selected profile, the selected profile corresponding to a specific type of author;

a natural language parser for identifying pairs of words, W1 and W2, with known contexts within a sentence, used together in conjunction; and

a context analyzer for designating matches between pairs of words, V1 and V2, where V1 is contextually equivalent to W1 as used in the sentence, and V2 is contextually equivalent to W2 as used in the sentence.

62. The apparatus of claim 61 wherein the selected profile is a medical profile.

63. The apparatus of claim 61 wherein the selected profile is a legal profile.

64. The apparatus of claim 61 wherein the selected profile is a scientific profile.

65. The apparatus of claim 61 wherein the selected profile corresponds to a specific author.

66. The apparatus of claim 65 wherein the specific author is a literary author.

67. The apparatus of claim 65 wherein the specific author is a designated user.

68. A computer-readable storage medium storing program code for causing a computer to perform the steps of:

providing training text conforming to a selected profile, the selected profile corresponding to a specific type of author; and

for each of a plurality of sentences within the training text:

identifying pairs of words, W1 and W2, with known contexts within a sentence, used together in conjunction; and

designating matches between pairs of words, V1 and V2, where V1 is contextually equivalent to W1 as used in the sentence, and V2 is contextually equivalent to W2 as used in the sentence.

69. A method for resolving context ambiguity within a natural language sentence, comprising:

providing a plurality of context equivalence groups, with specific pairs of the context equivalence groups designated as being matched, a context equivalence group being a group of words of the same grammatical type that are used in the same context;

parsing a natural language sentence to identify grammatical types of words within the sentence;

identifying context equivalence groups to which words within the sentence belong; and

resolving contexts of ambiguous words within the sentence, consistent with matches between the identified context equivalence groups.

70. The method of claim 69 wherein said providing, parsing, identifying and resolving apply to any of a multiplicity of natural languages.

71. The method of claim 69 wherein matches between pairs of context equivalence groups are stored in at least one relational database table.

72. The method of claim 69 wherein the context equivalence groups are manually generated.

73. The method of claim 69 wherein matches occur between pairs of contextual equivalence groups that contain respective words used together in conjunction with one another.

74. The method of claim 69 wherein a connecting word is associated with a match between a pair of context equivalence groups.

75. The method of claim 74 wherein said resolving is based on the presence of a specific connecting word within the sentence.

76. The method of claim 69 wherein a ranking is associated with a match between a pair of context equivalence groups.

77. The method of claim 76 wherein the ranking is used to prefer one match over another, in case said resolving produces multiple consistent contexts and must choose one over the other.

78. The method of claim 76 wherein the ranking is based on frequency of usage.

79. Apparatus for resolving context ambiguity within a natural language sentence, comprising:

a memory for storing a plurality of context equivalence groups, with specific pairs of the context equivalence groups designated as being matched, a context equivalence group being a group of words of the same grammatical type that are used in the same context;

a natural language parser for parsing a natural language sentence to identify grammatical types of words within the sentence;

a context identifier for identifying context equivalence groups to which words within the sentence belong; and

a context resolver for resolving contexts of ambiguous words within the sentence, consistent with matches between the identified context equivalence groups.

80. The apparatus of claim 79 wherein said natural language parser, context identifier and context resolver apply to any of a multiplicity of natural languages.

81. The apparatus of claim 79 wherein said stores matches between pairs of context equivalence groups in at least one relational database table.

82. The apparatus of claim 79 wherein the context equivalence groups are manually generated.

83. The apparatus of claim 79 wherein matches occur between pairs of contextual equivalence groups that contain respective words used together in conjunction with one another.

84. The apparatus of claim 79 wherein said memory stores a connecting word associated with a match between a pair of context equivalence groups.

85. The apparatus of claim 84 wherein said context resolver resolves contexts of ambiguous words based on the presence of a specific connecting word within the sentence.

86. The apparatus of claim 79 wherein a ranking is associated with a match between a pair of context equivalence groups.

87. The apparatus of claim 86 wherein said context resolver uses the ranking to prefer one match over another, in case said context resolver produces multiple consistent contexts and must choose one over the other.

88. The apparatus of claim 86 wherein the ranking is based on frequency of usage.

89. A computer-readable storage medium storing program code for causing a computer to perform the steps of:

providing a plurality of context equivalence groups, with specific pairs of the context equivalence groups designated as being matched, a context equivalence group being a group of words of the same grammatical type that are used in the same context;

parsing a natural language sentence to identify grammatical types of words within the sentence;

identifying context equivalence groups to which words within the sentence belong; and

resolving contexts of ambiguous words within the sentence based on matches between the identified context equivalence groups.